

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) A membrane for use inside a testing cell, which cell has a pressure chamber for receiving a specimen and applying forces to said specimen, said membrane comprising a flexible film adapted to envelope said specimen and isolate said specimen from the interior of said pressure chamber, said membrane adapted to maintain intimate contact with said specimen, instrumentation embedded in said membrane for measuring a physical property of a specimen.
2. (Original) A membrane of claim 1 wherein said physical property being one of the group consisting of stresses, strains, deformation, temperature, soil suction or moisture content.
3. (Original) A membrane of claim 1 wherein said membrane has a longitudinal axis and a radial axis, said instrumentation oriented in said membrane to measure said physical property in the longitudinal direction.

4. (Original) A membrane of claim 1 wherein said membrane is tubular, said instrumentation oriented in said membrane to measure said physical property in the circumferential direction.

5. (Original) A membrane of claim 4 wherein said membrane has a longitudinal axis and a radial axis, said instrumentation oriented in said membrane to measure said property in the longitudinal direction.

6. (Currently amended) A membrane for use in a testing cell to isolate a specimen, said membrane comprising a flexible film having a thickness, said membrane adapted to ~~envelope~~ enclose a specimen, instrumentation embedded in said membrane thickness for measuring a physical property of a specimen wherein said instrumentation is oriented in multiple directions in said membrane to measure said physical property and calculate Poisson's ratio.

7. (Currently amended) A membrane of claim 1 wherein instrumentation is embedded in said membrane thickness for measuring strains causing deformation of a specimen.

8. (Original) A membrane of claim 7 wherein said membrane has a longitudinal axis and a radial axis, said instrumentation

oriented in said membrane to measure strains in the longitudinal direction.

9. (Original) A membrane of claim 7 wherein said membrane is tubular, said instrumentation oriented in said membrane to measure circumferential properties in response to stresses.

10. (Original) A membrane of claim 9 wherein said membrane has a longitudinal axis and a radial axis, said instrumentation oriented in said membrane to measure strains in the longitudinal direction.

11. (Currently amended) A membrane for use in a testing cell to isolate a specimen, said membrane comprising a flexible film having a thickness, said membrane adapted to envelope a specimen, instrumentation embedded in said membrane ~~thickness~~ for measuring strains causing deformation of a specimen wherein said instrumentation is oriented in multiple directions in said membrane to measure said physical property and calculate Poisson's ratio.

12. (Original) A membrane of claim 7 wherein said instrumentation includes an instrument for measuring temperature in the specimen.

13. (Original) A membrane of claim 7 wherein said instrumentation includes an instrument for measuring moisture content of the specimen.

14. (Previously presented) The membrane of claim 7 wherein said instrumentation includes an instrument for measuring soil potential.

15. Canceled

16. Canceled

17. Canceled

18. (Previously presented) A membrane of claim 1 wherein said flexible film is formed from one of the group consisting of latex rubber, silicone rubber, urethane, or Silastic.

19. (Previously presented) A membrane of claim 1 wherein said flexible film is tubular with a continuous sidewall with a cavity formed in said sidewall, said instrumentation disposed in said cavity.